SIGNIFICANT WILDERNESS QUALITIES:
CAN THEY BE IDENTIFIED AND MONITORED?

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Colloquium
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INTRODUCTION

The third Research Colloquium, sponsored by the National Outdoor Leadership School (NOLS), convened the week of August 10-15 in the Popo Agie Wilderness, Shoshone National Forest, Wyoming. The purpose of these colloquia is to facilitate interaction and discussion between wilderness managers, researchers, and NOLS personnel in a wilderness setting. At each colloquium, discussion centers around a selected theme. For the third colloquium, participants were asked to write a short paper on the theme. This report is a compilation of those papers, along with a synopsis of discussions held during the colloquium.

The theme was formulated in the following manner: Given that the goal of wilderness management is to avoid the impairment of significant conditions, features and qualities of the wilderness resource, 1) what are the most significant of these conditions, features, qualities? and 2) how can they be monitored to ascertain whether or not they are preserved?

This theme was selected because it is fundamental to all wilderness management. Management should be focused on problems that threaten the most significant qualities of wilderness. And research that addresses these threats, problems and potential mitigation measures should be given a high priority.

A more specific reason for selecting this theme relates to interest in several recently developed management planning systems, such as Limits of Acceptable Change and Visitor Impact Management. These systems link management objectives and monitoring by proposing that management be driven by monitoring of key indicators—to determine whether or not management objectives are being met. These systems are being widely embraced because they provide for objective, generally agreed upon judgments about where wilderness qualities have been or are being lost; however, their value hinges entirely upon the significance of the indicators that are selected. Indicators must be indicative of the most significant wilderness qualities (or impacts on those qualities) and it must be feasible to accurately monitor those indicators. Otherwise, wilderness qualities can erode away, despite monitoring data that indicates objectives are being met.

Many of the most significant wilderness qualities are relatively intangible. Congress wrestled with wilderness definitions for eight years before passing the Wilderness Act, leaving definitions poetic and rather general. General and intangible qualities are particularly difficult to monitor. Can they be monitored or can meaningful surrogates be developed? Further wrestling with this difficult theme seemed an appropriate task for a collection of managers and researchers some 23 years after passage of the Wilderness Act.

We gathered a diverse group of people for the colloquium. We attempted to include people from as many parts of the country, as many affiliations and as many backgrounds as possible. Colloquium participants were:


Jim Currivan--Wilderness Program Leader, Bureau of Land Management, Arizona.

Tim Easley--Research Advisor, NOLS, and Chairman, Department of Forest Resources, University of New Brunswick, New Jersey.

Bill Hammitt--Professor, Department of Forestry, Wildlife, and Fisheries, University of Tennessee.

Drew Leemon--Program Planner, Wyoming Branch, NOLS.

Bob Manning--Associate Professor, School of Natural Resources, University of Vermont.

Jeff Marion--Research Scientist, National Park Service, Mid-Atlantic Region, Pennsylvania.

Steve McCool--Professor, School of Forestry, University of Montana.

Dave Neary--Director, Wyoming Branch, NOLS.

Debbie Overton--Graduate Student, College of Forestry and Natural Resources, Colorado State University.

Dave Parker--Board of Directors, NOLS, Washington, D.C.

Sukey Richard--Assistant Marketing Director, NOLS, Wyoming.

Toivo Sober--Wilderness Specialist, U.S. Forest Service, Kawishiwi Ranger District, Superior National Forest, Minnesota.

Dick Spray--Wilderness Staffer, U.S. Forest Service, Southwest Region, New Mexico.

The diversity of ideas and perspectives in the papers that follow, all inspired by the same theme, reflect the range of backgrounds and interests of colloquium participants.
WILDERNESS QUALITIES AND BACKCOUNTRY MANAGEMENT AT GRAND TETON NATIONAL PARK
by Dan Burgette

The question that we have been asked to address---what are the conditions, features, and qualities that make up a high quality wilderness experience?---is central to how we manage wilderness areas. The personal philosophy of wilderness managers has led to a variety of de facto answers to this question in the past. Some managers seem to think that the only condition required is proposing an area as wilderness, and saying that it will be managed according to the spirit of the Wilderness Act. Others are asking questions about Limits of Acceptable Change, how is wilderness managed differently than backcountry, and can wilderness management actions be upheld in court when challenged? For many, there are more questions than answers elicited by the above question. Hopefully this colloquium can focus the questions, and provide direction toward the answers. In Grand Teton National Park there are 135,680 acres of recommended wilderness that are to be managed so as to preserve the wilderness character and values until Congress decides whether to include the area in the National Wilderness Preservation System. Wilderness management in the Tetons is complicated by three things. First: each summer about 165,000 people hike in the recommended wilderness area. Second: most of those hikers don’t know that they are in recommended wilderness. Third: in 1974, Wolfley analyzed backcountry use in the Tetons and found that most users were attracted by the physical aspects of the park. They were not overly disturbed by the visitor use levels, and most users were seeking a less than “pure” wilderness-type experience. Even though solitude is not necessary for most Teton visitors to meet their expectations, it is supposed to be a key attribute of a wilderness experience. It can be argued that most backcountry visitors have a high quality experience in the wilderness. Wilderness purists wouldn’t have a high quality wilderness experience at Hidden Falls on a busy day with up to 370 people passing per hour. However, the wilderness purist could meet his expectations in many of the pristine areas of the park.

As Cole has written, limitations on wilderness recreational use cannot often be based on ecological factors. Therefore, use limits must be based on sociological factors. User expectations concerning numbers of people encountered per hour, time of day, and location are very important in determining quality of wilderness experience. Physical impacts such as trail and campsite location, size and condition are aesthetic factors as they relate to expectations of users and managers.

Wilderness management in an area such as Grand Teton National Park is a compromise. The ideals of the Wilderness Act are the guide. The numbers of people that visit the backcountry to see the spectacular scenery can easily find “a primitive and unconfined type of recreation.” However, finding “outstanding opportunities for solitude” is impossible at some locations at some times. Finding opportunities for solitude is always possible at many locations, however. The result of pragmatically blending the political realities of managing a popular area with the ideals of the Wilderness Act is a compromise.

The compromise defined in the 1987 Backcountry Management Plan for Grand Teton National Park stratifies the backcountry into five Management Zones. Zone I is comprised of corridors along gateway trails. Zone II is corridors along maintained trails not in Zone I. Zone III is semi-pristine areas with unmaintained trails created by visitor use. Zone IV is pristine areas. Zone V is open space, such as sagebrush flats, not in other zones. Management objectives are defined for each zone, with management actions outlined.

Stratifying the backcountry recognized that not everyone needs pristine resources to have a high quality wilderness experience that meets their expectations. Visitors who can meet their expectations in Zones I or II will be directed there. Zone III areas are mainly used by climbers, or hikers looking for areas away from the crowds. Zone IV areas are intended for wilderness purists that need pristine areas to meet
their expectations. Zone V areas are seldom used for recreational activities.

By stratifying the resource and the management actions for various zones, the visitor is provided a range of opportunities that should meet the needs of the hiker wanting to look at the scenery, and the wilderness purist that doesn’t want to see many others in a pristine setting. At the same time, the resource is being preserved so that future generations should have similar opportunities to meet their expectations for a high quality wilderness experience.

The ideals that are the foundation of the Wilderness Act are hopefully evident in this compromise. Most of the use is in the Zone I and II trail corridors. Most of the recommended wilderness is in Zones I and IV. But there are difficulties to be addressed. Campers are managed by a permit system. Day use, the majority of back-country use is uncontrolled. As the population grows and recreational pressure increases on a finite amount of wild land, where and how should controls be established to protect the opportunities for quality wilderness experiences? And when established, will the limits be defensible in court if challenged like limits at Mt. Rainier National Park were?

So back to the question-- what is it that makes a quality wilderness experience? It is assumed that the setting needs to be natural-- by someone’s definition. After that it seems to depend on the user’s expectations. How many human impacts or encounters that are acceptable depends on the individual’s expectation. The fact that over 300 people per hour can pass Hidden Falls with hardened trails and buck and rail fences to channel foot traffic and people still have a positive experience indicates that their expectations are different than campers at Cirque Lake that don’t expect to see (m)any others. It is clear, however, that there must be some upper limit of encounters per hour beyond which few visitors would consider the experience positive. Determining these sociological limits, in light of management objectives, seems to be the key to answering the question.

When discussing use limits that will allow continued high quality wilderness experiences, several questions arise relative to different user groups’ expectations. How many people can meet their expectations in a natural setting with given characteristics? How does this number impact on other potential user groups? How many people per hour, for example, is tolerable for which groups? What educational means can be used to effectively channel groups into areas that meet their needs? How important are physical impacts such as campsites or fire rings per area to various user groups? What strategies are most effective in educating visitors that aren’t attuned to wilderness behavior ethics? How can visitors be taught the importance of not visiting pristine areas unless they need pristine areas to meet their wilderness experience needs? Where in these educational efforts do we consider the effects of talking about pristine areas? One reason that these areas are still pristine is because not many people visit them. Educating people about them may be like advertising them.

An underlying question deals with what should the management objectives for a wilderness area be. Whose definition of “quality wilderness experience” should be used? Obviously the purist’s definition has been exceeded in Grand Teton’s Zone I, and in some Zone II areas. But the definition for the average user has likely not been exceeded. Should a more “pure” definition be the standard? Should the entire wilderness area be held to the same standard, or is stratification tolerable? Clearly, reducing the standard for an entire wilderness area so there are no pristine or semi-pristine areas is unacceptable. But if a more “pure” standard, based on the “outstanding opportunities for solitude” clause is the basis for area wide management, how can managers defend necessarily strict use limits in court?

In Grand Teton National Park, past managers started use limits such as no campfires above 7,000 feet elevation, party size of six maximum, groups of twelve maximum, no groups allowed to camp in off-trail areas, horse users must stay on maintained trails and use processed feed for
their animals. As a result, physical impacts, and certainly ecological impacts, are not the biggest challenges for future managers. Sociological factors that affect the quality of wilderness experience, especially among day users, are not well understood. Social pressures that come with crowds that are attracted to a popular national park will be the biggest challenge for future managers concerned about providing opportunities for quality wilderness experiences.
SUMMARY OF DISCUSSIONS

As was true at the two previous NOLS research colloquia, discussions among participants were intense and wide-reaching. Group discussions, using the presentations by each person as a springboard, were the setting for most of the exchange of ideas, and the source for the summary which follows.

The main benefits of the colloquia, however, probably do not come directly from the scheduled programs. Repeatedly one hears that the most useful outcomes of typical research conferences occur in hallways and lobbies, not from the formal presentations--the conference is almost an excuse to get scientists together so they can interact professionally. That observation is even more true of the NOLS colloquia, but the interaction is in the wilderness, on the trail (I could usually count three separate conversations going on, 95 per cent of them of a professional nature), in camp, out fishing, and even while trying to fall asleep, and it involves more than just scientists. Networks are formed, and ideas are tested and expanded in a way that goes well beyond what happens in the usual conference setting in a hotel.

All participants are together for most of five days with never a telephone call. Some sort of special chemistry has worked on each of the first three colloquia that has resulted in the development of a strong sense of community. Everyone has ample time to express their ideas and all comments seem to be heard and considered thoughtfully and respectfully, even the occasional far out brainstorm. The posturing and status-seeking that is found too often at formal conferences blessedly seems totally absent in the wilderness setting.

The group discussions started with comments about what participants hoped to gain from the session. A wide range of goals emerged: learn about research with practical applications, further development of NOLS research mission, prioritize the qualities that really define wilderness, open up the key issues, explore ways NOLS can provide a service helping with monitoring, the down-to-earth details of how to monitor (hands-and-knees, tape rule procedures,) testing ideas developed in isolation, the functions wilderness serves (what do people take away from it?), the respective roles of managers and researchers and their interaction, identification of research needs, sharpening basic wilderness definitions and especially how to monitor social conditions.

The discussion of colloquium goals was followed by the round-robin responses of every participant to the question about the important qualities of wilderness and how they can be monitored. Written versions of most of these were submitted and included in this report.

Wednesday evening the group developed a list of issues and questions related to the overall theme of the colloquium, with the hope that these could help structure some of our later discussions. The list is difficult to categorize on any single logical dimension or level of generality, but it included the following:

1. The role of zoning wilderness, especially standards for conditions.

2. How to monitor impacts to the wilderness resource.

3. The concept of wilderness as a combination of many conditions.

4. Wilderness as a state of mind (cultural definitions of wilderness).
5. Do wilderness experiences require truly natural conditions, or would a reasonable appearance of naturalness suffice?

6. The need to balance concern for terrestrial ecosystems with more attention to aquatic ecosystems.

7. The need to monitor “wilderness manners” exhibited by visitors.

8. How significant ecologically are many of the aspects frequently monitored?

9. How can NOLS best serve as a laboratory for wilderness questions?

10. The balance between biocentric and anthropocentric wilderness concepts.

11. How can education best serve wilderness visitors and managers?

12. How can wilderness researchers, managers, and visitors relate most productively?

13. Can we reduce the most important qualities of wilderness to things we can measure?

We returned to many of these topics in our discussions, although we decided not to try to focus on one or two specifically.

Thursday we reviewed the results of our minimum impact camping above Cloverleaf Lake. Our group campfire the night before on a fire-resistant “blanket” was undetectable. We could find almost no signs of our two nights of use. One tent group challenged the rest to discover where they had cooked. They won; we could not find their kitchen.

A friendly, hungry Wind River bear persuaded us to move camp. Along the way we gathered on a large, rather impacted campsite on Middle Lake -- a site with about 2,500 square feet of devegetated area. This served as a case example for a discussion of acceptability of campsite impacts, and appropriate low impact camping practices, and management actions. The pros and cons of encouraging dispersal or concentration of wilderness were explored. The practice of managers developing tent sites was discussed, without any consensus.

The potential use of wilderness management zones to structure minimum impact messages was considered, with a general feeling that this could be effective.

We returned to our basic theme and finally agreed that we had not been very successful defining wilderness conditions in the abstract. We agreed that it is an extremely difficult question, although critically important. It reminded one of us of trying to define pornography--“I can’t define it, but I know it when I see it!” The idea of a standard, agency-wide set of specific wilderness indicators with standards for each, which the Forest Service was considering, was considered a poor approach.

Our last structured discussion centered on future colloquia. A number of ideas were proposed, including:

1. Have each participant come with a problem they are concerned about and a possible solution.

2. Focus on a case study, for example, the new wilderness management plan for Grand Teton National Park.

3. Examine the involvement of the public in wilderness management planning, perhaps using the recent experience in LAC planning
for the Bob Marshall Wilderness complex as a case study.

The NOLS representatives pointed out that future colloquia do not need to be conducted in the Wind River range. NOLS could support a colloquium just about anywhere. NOLS plans to continue sponsoring the colloquia. A volunteer to organize the next one has yet to step forward. We all hope someone will rise to the challenge. Our experience indicates it is some work, but not overwhelming, and very rewarding. We recommend it!

NOLS deserves a great deal of credit for conceiving the colloquia and following through effectively and persistently, and being so tolerant of researchers. The colloquia provide uniquely valuable opportunities for wilderness users, educators, managers and researchers to become well acquainted and to learn from one another.